



“We examine core requirements and tailor solutions to maximize benefits to the customer.”

TERRY RYAN, EXEL

Logistics

MAGAZINE

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MEAN MACHINE

The powerful and agile Vector C15

Retail therapy

Salton goes for growth

Foreign assignment

Meet BT's man in Athens

A strong year for the industrial truck business

→ The unusual aspect of the current upswing is that it is happening concurrently worldwide. More often than not, a few markets tend to grow while others stand still or decline, but we are now seeing a general rise in demand across the line – the result being a record level of global demand in our sector.

2004 to date has been a very strong year for the BT Group, with demand on a historically high level. BT has also increased its market shares, and volumes in our production units have risen dramatically. Continuous efforts are under way within the BT Group to raise productivity and efficiency and thereby steadily strengthen our competitive power.

NEW PRODUCTS

One of the reasons behind our growing market shares is the past year's product launches. A modern, attractive product portfolio is crucial to our market position and our new products have been very well received. This has been a major contributor to our overall success.

One cloud on the horizon is the continuously increasing price of raw materials, including steel. Even so, we generally predict continued market growth in 2005, although it may be slower than in 2004. Based on our strong position, we are well-equipped to serve our customers and take offensive action on the market in the coming year.



Per Zaunders,
president
and CEO,
BT Industries

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Logistics

MAGAZINE

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Jim Malvaso, president and CEO of BT Raymond, Steve Northrup, the Fire Station Building Committee, Rick Woerter, fire chief, and Pete Raymond, The Raymond Foundation, pose in front of the Village Fire Department in Greene, New York.

Funding for fire department

The Village of Greene Fire Department Building Fund will receive 650,000 U.S. dollars over a five year period from BT Raymond and The Raymond Foundation. The announcement was made at a ceremony at the Village Fire Department in Greene, New York, in October.

The fund is part of a USD 2 million project to replace the current fire station with a modern, single-story complex – complete with nine bays for apparatus and additional rooms for offices, stor-

age, laundering and training. The new station will allow the Greene Fire Department to better serve the emergency needs of the community.

BEST PROTECTION

The Greene Fire Department has 70 volunteers, including firefighters, EMS, and auxiliary members. Fire Chief Rick Woerter says, "The expansion of this building will offer the residents of Greene the best protection possible."

Innovative Prolifter gets award

The Prolifter hand pallet truck was a clear winner at this year's Preventica French Fair, held in early June in Strasbourg, France. The jury awarded it the 2004 Innovation Award in the Handling/Lifting category.

Preventica Fair is an

annual event that specializes in ergonomics, health, safety, work environment and training. It attracts some 5,000 visitors and is held over two days. The award was given by labor safety professionals drawn from government

authorities, professional organizations and specialized and trade and industry journals. Thanks to its close link to the French Social Security, the fair creates much product awareness and acknowledgement.



The Orion range of trucks features BT Powerdrive, providing smooth and efficient control.

Stellar improvements to Orion range

The ground-breaking Orion range of powered pallet trucks has been updated with important extra features and capacities. The models are the LWE 180; LWE 200; LPE200 and stainless steel LPE2001; and the LPE240. All models feature BT Powerdrive, providing smooth and efficient control plus a host of useful functions such as the unique Click-2-Creep speed function and up to 100 pin codes for secure access. Each of these codes can also activate suitable preprogrammed performance parameters for each operator.

The LPE model drive traction and control is further enhanced through the BT Power-track system, irrespective of wheel wear. Improved climber skids have been fitted to the higher capacity models, for improved pallet access.



Among the new features are a mount for devices such as thin-client PC, radio data terminal and barcode reader.

New model, new standard

The original Reflex from BT set the standard for productivity, safety, economy and overall performance in reach trucks. Now the company is building on that success with

the new B/E series. Both models feature 10 percent faster lift and lowering speeds plus a lift capacity of 2,500 kilograms (5,500 pounds), with lift height in excess of 11

meters (36 feet). The E series is fitted with the unique BT tilting cab. Also among the host of new features is the E-Bar, a universal mount for warehouse management devices

such as thin-client PC, radio data terminal and barcode reader. Pin code entry is offered as standard, ensuring that the truck can only be used by authorized personnel.



Freight and contract logistics giant Exel operates in 120 countries worldwide.

A MATTER OF **EXEL-LENCE**

Handling the delicate transports of blood products, and supplying auto makers with parts, 24 hours a day, Exel is quickly becoming one of the biggest players on the contract logistics markets of the South Pacific.



AZURE BLUE SKIES stretch from horizon to horizon over Sydney and the South Pacific headquarters of global logistics giant, Exel. The offices sit right on the edge of Australia's largest airport, Kingsford Smith, without doubt the country's transport nerve center and a logical location for a company of this stature.

Terry Ryan, the managing director of Exel's South Pacific operations, meets *Logistics Magazine* with a stiff handshake and bustling air. He is tanned in the way Australians are; a consequence of the endless long, hot and sunny days on the world's driest continent. Out the window behind him, planes from all the major international airlines are refueling, taking off and landing.

"We live in a very challenging part of the world for logistics and freight," Ryan says. "By international standards we are a hell of a long way from anywhere. Our reach stretches across Australia – as large as the United States, but with a population of just 20 million – to New Zealand and into the islands

that dot the South Pacific, such as Fiji and New Caledonia.

Geography and distance, he says, rank among the big challenges for Exel in these parts. And the region itself is a new challenge for Exel, the global freight and contract logistics giant that employs 109,000 staff in 120 countries worldwide. While Exel has had a presence in Australia since 1908, it entered the burgeoning contract logistics market here in 2000.

GROWING FAST

"Exel is a new entrant in contract logistics," says Ryan. "This business has only recently been moving towards maturity here. I'd say it is eight to 10 years behind the European and U.S. markets. But growth is 22 percent each year – and we are growing at three times that rate."

Indeed the prognosis for further business expansion is good, with the region sitting on the cusp of the Asia Pacific, where explosive manufacturing and economic growth will be centered over the next decades; particularly as

countries such as China gather momentum and exert the economic clout that analysts have been forecasting and are now seeing realized.

Already Exel is a major contract logistics provider in the region, operating 27 facilities with more than 1.9 million square feet of footprint throughout Australia and New Zealand.

Worldwide, Exel is one of the biggest players, providing "some of the most innovative and dynamic supply chain solutions available." Its solutions cover the entire supply chain – from design and consulting to freight forwarding, customs clearance, warehousing and distribution centers, integrated information management and e-commerce.

MAJOR PLAYER

Exel ranks second in airfreight forwarding, first in contract logistics, has an annual turnover of 10.9 billion U.S. dollars and services 70 percent of the largest quoted non-financial companies.

In Australia, where staff numbers



TEXT:
DAVID PASSEY
PHOTO:
DAVID PASSEY
AND EXEL



Terry Ryan,
managing
director of
Exel's South
Pacific
operations



Exel's solutions
cover the entire
supply chain –
from design and
consulting to
freight forwarding,
customs clearance
and warehousing.



Sean Maguire, director of Retail, Automotive and Technology.

“IF WE ARE TO CONTINUE OUR GROWTH AT THREE TIMES THE RATE OF THE LOCAL MARKET INTO THE FUTURE, THERE IS UNLIKELY TO BE A DULL MOMENT FOR YEARS TO COME YET.”

➔ have grown from some 300 to 1,100 in the past four years – and more than 1,350 across the South Pacific – the list of clients is prodigious, including many leading names in healthcare, automotive, technology and the consumer sectors.

The level of sophistication required is extraordinary. “When we develop new supply chains we use state-of-the-art modeling tools,” says Ryan. “We take anticipated market data, product value, product data and model optimum locations from a service and cost perspective – decide where best to locate a manufacturing plant, a warehouse; where to put distribution centers and service points. We use warehouse simulation to draw up a 3D picture of an operation, defining congestion points, designing balance and efficiency, to devise world-best solutions.”

Freight forwarding makes up 40 percent of Exel’s business in the South Pacific, where, perhaps surprisingly, the Australia-New Zealand air route is in

the top five in volume in the world.

The other 60 percent of Exel’s business is the new venture of contract logistics, which is also known as third party logistics or 3PL. Healthcare, in which Exel is the leading regional player, makes up 60 percent of this; retail, automotive and technology, 40 percent.

PROVIDING EXPERTISE

Contract logistics has emerged as a key business in Australia and New Zealand. According to Ryan, succeeding means Exel must become expert in each client’s business, in order to manage inventories, warehousing, transport, product tracking, IT requirements and delivery.

“Global expertise allows us to provide excellence,” says Ryan. “We don’t offer off-the-shelf solutions. In every instance we examine core requirements – be that inventory reduction, faster turn around times – and tailor solutions to maximize benefits to the customer.”

A major new strategic thrust for Exel is to set up client call centers. It has done so for one of the world’s largest P.C. and server manufacturers, providing complete sales and service – “from Islamabad in Pakistan to Mongolia to Dunedin, New Zealand” – with very short turn-around times.

LIVE-SAVING BUSINESS

Healthcare is a sensitive area, in which Exel has helped produce spectacular logistical responses. When a terrorist bomb blew up a nightclub in Bali, Indonesia two years ago, Exel played a vital role on behalf of clients amid a dire medical crisis.

“One of our clients, whom we had begun to work with two weeks previously, is a supplier of human skin for skin grafts,” says Ryan. “As soon as the news broke, we began moving skin into Bali, Darwin and Perth. It was a life and death matter. Moving such a delicate product is enormously difficult. A few degrees variation during the trip and the skin becomes worthless.”



Exel works in such sensitive areas as healthcare, where delivering can be a matter of life and death, and the automotive industry, where turnaround for a part is often less than 24 hours.

Every day, blood products are flown from New Zealand to a blood processing plant in Melbourne, processed into component parts, and flown back into New Zealand hospitals for the medical procedures that again are saving lives. Blood is recognized as one of the most difficult products to move logistically, and high levels of expertise are needed.

AUTOMOTIVE DEMANDS

Sean Maguire is the director of Retail, Automotive and Technology. He says that while healthcare attracts much interest because of the sensitivity of pharmaceutical products, the automotive area of the business is also difficult and sensitive.

“Our average customer will have between 1,000 and 1,500 component parts,” he says. But the average auto manufacturer has about 36,000. Turnaround for a part can be less than 24 hours.

“We work with a major car manufacturer at its final assembly plant. Every

86 seconds they build a new car. If we fail to have the right part, quality checked, 24 hours a day, seven days a week, the line stops.”

With the value of goods in warehouses, security is seen as a competitive advantage at Exel.

ARMED GUARDS

Exel sites have 24-hour armed guards, perimeter fencing, strictly controlled vehicle access, 210 security cameras, security control rooms and guard dogs. All trucks are GPS tracked and have immobilizers.

“We get involved in lots of weird and wonderful areas,” Maguire says. “Defense troop deployments, for example. And Exel is the appointed logistical manager for Formula 1 Grand Prix, which is huge, and again an area in which failure is inconceivable. You might say that, in our business, there is rarely a dull moment. And if we are to continue our growth at three times the rate of the local market into the future, there is unlikely to be a dull moment for years to come yet.” ●

Partners in innovation

Exel has exacting standards when it comes to its warehouses. Given that the healthcare sector is critical for Exel, hygiene and cleanliness are among the company’s primary requirements. Sean Maquire of Exel says this is a key reason why Exel in Australia relies on BT Lift Trucks for its warehouse forklift requirements – as Exel does elsewhere in its global operations.

“The electric trucks are clean, there is no smell associated with them, they provide pollution-free solutions and they are quiet and effective. But it is more than that. BT, like us, is an innovator,” he says. “Just as we deliver innovation to our clients, we want our suppliers to do the same. BT comes to us with concepts and works closely with us to provide leading solutions to our clients.

“Our solutions design teams work very closely with the BT people. Their team is very strong. They don’t just sell us a truck and walk away – they are actively involved in the life of each truck.”

To date, BT has placed 202 forklift trucks in Exel facilities across Australia. Both companies are suppliers to one another. Since June 2003, Exel has shipped containers with forklifts and spare parts from BT’s factory in Mjölby, Sweden, to Australia. Exel also looks after customs clearance, declarations and duty.

Mikael Jonsson, national equipment and supply manager at BT in Australia says, “Our relationship with Exel is excellent, and we enjoy the type of innovative relationship that exists between us. Since the entry of BT’s sales and service operation into Australia, we have had a phenomenal growth and we are currently enjoying a 25 percent market share in electric warehouse trucks.”

ELECTRIFYING GROWTH

Salton Europe has had to deal with an unusual problem: growing too fast for its distribution.



TEXT: ELAINE
MCCLARENCE
PHOTO:
TONY BARRETT

IF YOU WALK into any supermarket or store on a high street in the United Kingdom, the chances are that you will see several of Salton Europe's products gracing the shelves. While its brands of small electrical appliances are household names and range from kettles, to tabletop products, clocks, lighting products, personal care, hair care and wellness products, Salton Europe is less familiar, simply because its name is just three years old.

In 2001 Salton Europe Limited became part of the 1 billion U.S.-dollar Salton Inc. Group of companies. Prior to this, the company had traded for more than 100 years as Pifco Limited and, as such, had a long and proud history in the electrical appliance industry.

RAPID GROWTH

Over the last three years, the company has grown to become the United Kingdom's leading supplier of small electrical appliances to the retail industry. In the last two years alone, sales have more than doubled. Indeed, Salton experienced such rapid increase in sales that it outgrew its distribution.

Roy White, distribution director of Salton Europe explains that keeping up with the sales was a challenge. The company leased additional warehouse space and outsourced some of its activities to try to keep up with supplying customers. "We were in a catch-up situation. The challenge has been to try and stay one jump ahead of sales growth."

DISTRIBUTION CENTER

Realizing that it still had considerable growth potential, the company quickly planned the building and construction of a new state-of-the-art distribution center that could be integrated with its existing warehouse at Wombourne, near Wolverhampton. White says that a single central distribution facility offers



Site distribution manager Glyn Woodland checks out Salton's new warehouse facilities.



Roy White

"THE CHALLENGE HAS BEEN TO TRY AND STAY ONE JUMP AHEAD OF SALES GROWTH."

greater efficiencies than working from several sites.

Opened on August 6, 2004, the new distribution center took less than eight months to build and equip. "In 2003, we started to look at our long term requirements. It was an enormous logistic challenge," explains White. "It's been such a fast build. We have been very lucky, all the contractors have worked well with us, as a team." The new facility is built on the company's existing 20-acre site, where warehousing is already established. The new 137,000-square-foot (12,300-square-meter) distribution center has been

constructed to link seamlessly to the other buildings.

Much of Salton's growth and success comes from the strong brand image of its products, coupled with the company's close relationship to retailers and a clear outsourcing strategy for its manufacturing. Salton mainly sells its products to specialist retailers, department stores, grocery retailers, electrical retailers, catalogue shops and mail order companies. Many of its customers are major retail chains in the United Kingdom, including Argos, Boots, Comet, Currys, Index, Littlewoods, GUS, Marks & Spencers, John



With a single state-of-the-art distribution center, Julie Archer and Salton can better serve the customers.



Operations manager Steve Ashington in one of Salton's many warehouse trucks supplied by BT.

Lewis Partnership, Wilkinsons, B&Q, Tesco, Debenhams, Sainsbury's, Allers, Costco and Aldi.

VALUE ADDED

Such customers frequently request special versions of Salton's products and these "value-added" features are often added at the warehouse packing stage. This puts additional pressure on the logistics function. The real test for the new distribution facility will come in the run up to Christmas, as sales double and treble each month. White is confident that his team can meet this challenge as the system

beds in. "The fact is that we can now give a better service to the company. What the salesmen sell, we can deliver – at the right time, to the right place and to the right specification."

More recently Salton has started to expand into the European markets. In France, it acquired a company called Look For. Italy, Germany and Spain also have new Salton companies that are set to expand over the next few years. What this means for Roy White and his logistics team is uncertain at the moment, but you can rest assure that they are already planning ahead. ●

New level of automation

"By the end of this year we will have a single unified distribution center that will serve the whole of the United Kingdom," says Roy White, distribution director of Salton Europe. The center can hold 29,624 pallets. The company has a basic product range of 200, though there are many variants by customer request. Manufactured goods are normally delivered loosely loaded and then leave the warehouse in palletized loads, tailored to the customers' requirements.

Within the Salton facility, BT Rolatruc has supplied seven C15 combi trucks, eight counter-balance (CBE) units and a further eight P205s. The C15 is designed for highly intensive operations that require maximum use of available space and the highest levels of productivity. It can lift 1,500 kilograms (3,300 pounds) to 10 meters (33 feet) and 1,000 kilograms (2,200 pounds) to 14.3 meters (47 feet).

COLOR DISPLAY

The C15 has an integrated control panel featuring a large, easy-to-read, color display. All truck functions are accessed electronically at this terminal. The four-wheel CBE is a smooth, easily operated and extra stable truck for all-round use. The front-wheel motors act as an electric differential, contributing to excellent maneuverability. "The drivers think that the trucks are marvelous," notes White. "We feel that BT's equipment represents value for money."

The equipment has helped bring new levels of automation within the plant. It is linked to a radio data terminal system that uses bar coding. This has reduced keying operations by 90 percent because the computer tracking system can confirm and trace pallets through the bar codes without the need for additional input by the operator once scanning has taken place.

MAN WITH A PLAN

Jonas Tornerefelt moved to Athens to manage BT Souel, the market leader in Greece for material handling equipment.

TEXT AND PHOTO:
ALEXANDER
FARNSWORTH



ONLY THREE WEEKS into his new job as managing director of BT Souel in Athens, Greece, Jonas Tornerefelt is tanned and relaxed, yet energetic and full of ideas.

Formerly service market vice president of BT Europe at the company's headquarters in Mjölby, Sweden, Tornerefelt accepted the Athens assignment because it offered the chance to gain new experience within the company and develop as a person.

Tornerefelt's aim is to gain hands-on experience and knowledge about the different functions in the total value chain of BT's business concept – to cross-pollinate, in other words.

During his eight years with BT, Tornerefelt has had various positions involving product development, product management, market support, spare parts logistics and, most recently, the building-up of a product area service market within BT Europe. Up until now, his positions have been pan-European and have involved extensive traveling.

GETTING OPERATIONAL

"Now, I am working locally and the bottom line is my baby," says Tornerefelt, who sees many opportunities to grow the business in Greece.

"It is very stimulating to be the managing director of the company. It is a great responsibility and I am working close to our customers and our core business, thus getting a better understanding of how we can grow our company and support our customers in their daily work. Here, I am involved hands-on in operational matters that I only knew about from a distance in my earlier positions. The challenge is the high pace of daily work, yet at the same time achieving the longer-term strategic goals of the company."

Moving to Greece in early August 2004 from Sweden, Tornerefelt admits, has meant a drastic change of environ-



At BT Souel, Jonas Tornerefelt has become more involved in operational matters.

ment. Athens is a huge city with the corresponding traffic problems. His two boys, 9 and 10, cannot roam freely as they did back home in Linköping, Sweden.

But the move has been positive for the family as a whole. The kids are enrolled in an international school. They are learning English now and will start with Greek and another European language later. They also must keep up with Swedish lessons on the side. On weekends, the whole family often goes swimming and diving in the waters around Athens, hence Tornerefelt's tan.

NEW CHALLENGE

Being the only foreigner at the helm of a company employing 65 people in Athens, Thessaloniki and on the island of Crete is a challenge that Tornerefelt is up to.

"I have traveled a lot during my working life, and I love working with people from different cultures," he says.

BT Souel's business model is based on selling material handling equipment and supporting customers with service over the lifetime of the products. Maintaining long-term relationships and customer care is BT's ambition.

Business has grown considerably over the past several years, and BT Souel (the name comes from a fusion of the Greek words for Sweden and Greece) is the market leader in Greece.

Service coverage is strong, but there is still a great potential for expanding the service market portion of total sales. Greece is a maturing market where life-cycle approaches to customers' material handling operations can still develop.

So Tornerefelt's challenge is to secure continuous growth and develop the service market turnover to secure long-term customer relationships.

NEW IDEAS

As BT Souel has reached a certain strategic size, Tornerefelt sees a need to institute more routines and implement more IT-supported business processes in line with the best practices from other BT companies.

"We must have a well-oiled team with established procedures in order to support our customers well, grow our business, keep our quality high and our costs low," he says. "BT runs a transaction-intensive business with a broad customer base. We need to be more effective and ensure information transparency for each function.

"The spontaneous response by many people to internal problems within a company is that one needs to communicate more," says Tornerefelt. "But my view is that we should strive to eliminate the need for communication for our mainstream activities and only communicate for cases outside the norm."

Tornerefelt's management ideas will be supported by increasing the flow of information to employees about developments in the company and changes that are to be implemented.

This is also the benefit of undertaking the position he has recently filled. It cross-pollinates company knowledge, creates an understanding for different people's working conditions and strengthens the company culture.

"Changing position is a great opportunity for every individual, and it strengthens BT as a company," he says. ●

**“I LOVE WORKING WITH PEOPLE
FROM DIFFERENT CULTURES.”**

Tornerefelt's truths

Name: Jonas Tornerefelt

Age: 38

Civil status: Married; two sons,
ages 9 and 10

Education: MSc in industrial
engineering and management,
Linköping University; MBA,
Uppsala University

Previous jobs: Five years
within sales at ABB before
joining BT in 1995

Hobbies: Sailing, tennis,
soccer, jogging, skiing





The new center is run by worldwide logistics provider Kühne & Nagel.



Production of dialysers at a Fresenius Medical Care plant in Germany.

ONE CENTER FOR THE WORLD

Fresenius Medical Care is the world's biggest provider of products and services for people with kidney failure. It supplies more than 1,500 medical clinics with equipment and consumables, and at the mid-point of this global effort is a logistics center in Germany.



THE FRESENIUS DISTRIBUTION center in Gernsheim near Frankfurt went online 2002 and now sees some 1,200 pallet movements a day. Fresenius' national warehouses around the world are serviced from here, except for those in Germany, Austria, Switzerland and the Benelux countries, which are serviced from nearby Darmstadt. The new center is run on Fresenius' behalf by worldwide logistics provider Kühne & Nagel (KN), which was also the capital project and facilities consultant during the development period.

In the past, Fresenius relied on five warehouses. Bob Jamieson, logistics manager for the Central region with KN, says that decentralization had one main advantage: if anything happens to one facility, the others can jump in. On the other hand, the company has to operate multiple inventories, multiple

manpower and inter-facility transport.

One central facility is much more efficient, but, says Jamieson, "If anything happens, you can't supply the market." And that, for a medical supplier on whom many people rely for life-saving treatment, could be disastrous.

SAFETY FIRST

So KN had to reassure Fresenius above all about security. "We had to have a very strong and stable fire-prevention system," says Jamieson, "and complete IT back-up. Perhaps our main challenge was to ensure that Fresenius felt comfortable with the reliability of the single distribution center."

In the development period, KN simulated IT breakdowns, to make sure the company could still deliver. And in the middle of 2003, the IT systems really did break down for 24 hours. "We did

everything manually, according to our pre-planned disaster recovery programs, and booked everything in after the system was running again. The year-end stock-take showed nothing was missing, and the customers didn't notice."

Fresenius and KN had to decide initially whether to run the warehouse fully automatically or semi-automatically with RF barcodes. After analyzing throughput and product spectrum, they settled on the latter. "At that time it was borderline to get up to 13.8 meters [about 45 feet] for the top racks with manual machines," says Jamieson. "Going up to that height with 800 kilos [almost 1,800 pounds] produces a lot of swing." That was one reason for choosing BT's CTX for the Very Narrow Aisle (VNA) high bay racking. The CTX comes in a four-wheel version, providing extra stability.

THE FLOOR ASPECT

However excellent the truck, if the floor is bumpy, the truck will jump about. "They call me 'Bob the Builder,' since I come from the construction industry," says Jamieson, "and I'm a bit proud of how flat the floor is." He got BT and Deutsche Flächentechnik, who built the floor, to talk to each other to achieve optimum results. "Many other companies have had big problems with such projects," says Jamieson.

Now that the warehouse is in use, says Jamieson, "the interesting thing

TEXT:
MICHAEL LAWTON
PHOTO: BT
AND FRESENIUS
MEDICAL CARE



The warehouse trucks at the new distribution center run smoothly on perfectly flat floors.



The main challenges with a single distribution center are safety and reliability, says Kühne & Nagel's Bob Jamieson.

about the operation here, is that it's not that interesting." KN spent a lot of preparatory time mapping out business processes and making them as simple as possible. "We've cut out human error by about 99 percent," he says. After 24 to 48 hours on the job the semi-skilled warehouse staff are working to a high level of accuracy and efficiency. They receive instructions delivered to data terminals in the trucks, and they simply do what's indicated, clocking up only around 0.005 percent failures ("where we've perhaps delivered four cartons instead of three," according to Jamieson).

EASY TO REACH

Goods come in mainly from Fresenius' own production facility in Sankt Wendel, 150 kilometers away. Because of limited storage space there, goods are delivered to Gernsheim and have to be stored there for between two and six weeks, depending on the product,

while samples are tested in Sankt Wendel. Only then can they be released for distribution. The system has to be fail-safe, and must fulfill international regulations. Every item has to be fully traceable in case of recall.

On arrival goods are delivered to a pick-and-drop point by reach truck, and then to high bay racking by VNA combi truck. When the goods are required, the process is reversed. For the 15 percent of orders that require split pallets, the reach trucks take pallets to the commissioning bays where vertical order pickers assemble orders and take them to the packing area.

GLOBAL DISTRIBUTION

"You'll notice that you scarcely ever see an empty truck," notes Jamieson. "If a truck goes to aisle six to drop something, it'll go to aisle seven next, to pick something up." That is thanks to the software developed by Fresenius to the requirements of KN's process technicians and which bolts on to Fresenius' own SAP management system.

The Gernsheim center is the critical point in Fresenius' global distribution system. The national warehouses around the world have only limited capacity, and most of the delivery is just-in-time. Jamieson says they deliver to many countries daily. With its systems expertise, Kühne & Nagel can assure Fresenius that its product will always go out absolutely reliably and safely. ●

"YOU'LL NOTICE THAT YOU SCARCELY EVER SEE AN EMPTY TRUCK."

Trucks for every turn

The Fresenius Distribution Center has two 10,500-square-meter storage areas and one 4,000-square-meter handling zone. Dispatchers from Fresenius, commercial staff from Kühne & Nagel and warehouse staff from Adecco Outsourcing work together on the site.

A particular challenge is the 13-aisle, 16-meter high bay racking, which requires unusual stability on the part of the forklift trucks employed. BT Deutschland supplies five four-wheel CTX Very Narrow Aisle (VNA) trucks, which are guided by rails in the narrow aisles and by induction loops elsewhere. Their articulated chassis gives them a very narrow turning circle. The reach trucks are Reflex RR-B7Aci with a 10.5-meter reach and a tilting cabin that allows the driver to get a better view of the load without straining his neck.

EASY MAINTENANCE

Vertical order pickers are from the OPAL series, which, like the VNA truck, lets the driver raise himself to the racks to examine or break up pallets. All the trucks are fitted with the same steering controls, to make interoperability easier, and the different models share many spares, making for easier maintenance and repair.



The driver can raise himself to the racks to examine or break up pallets.



Karl Harris is one of Abel-Womack's 100 factory certified field service technicians covering seven eastern states.

MORE THAN ABEL

From a single forklift truck to a total warehouse design, Abel-Womack Integrated Handling Solutions lifts the industry to new heights.



ACROSS MANY DIFFERENT industries, companies small and large rely on U.S.-leading supply chain partner Abel-Womack to provide solutions for their material handling requirements. Abel-Womack provides companies in industries such as retail, food, manufacturing and distribution with application-specific, turnkey solutions. From a single

TEXT:
JOANIE RAFIDI
PHOTO:
VICTOR BROTT

forklift truck to an entire facility, Abel-Womack offers clients a single source for design engineering, equipment procurement and on-going support.

“Our business model is dedicated to engineering the solution, managing the process and supporting the results,” says John Croce, president of Abel-Womack. “We focus on providing premier solutions that meet our clients’ business objectives and improve their bottom line.”

TWICE THE SIZE

The unique business model seems to be paying off. Since 1996, the company has grown substantially, more than doubling in size, and now supports a customer base more than 4,500 strong. With its three locations on the eastern seaboard of the United States, Abel-Womack products include a broad range of high-end BT Raymond lift trucks and complementary products such as conveyors, carousels, storage systems, overhead lifting equipment and warehouse management software.

Mike Romano, CEO of Abel-Wom-

ack, says he strongly believes that Abel-Womack is a true “value-added” partner for its clients due to its diverse offerings and capabilities. “Our customers find greater value in our unique business model, which differentiates us in the market,” he says.

Romano is quick to point out, though, that it is not just the solutions and services Abel-Womack offers that make the company successful – it’s the people. “Our specialized staff is committed, hard-working and always customer-focused. We may set the vision for the organization but our employees make it happen.”

Croce agrees and says without dedicated employees, it would be impossible for the company to grow as much as it has. “It’s the caliber of our people. Many of our team members have as much as 20 years of valued experience,” he says. “We set individual objectives that they must meet or exceed, with incentives earned upon achieving performance goals.”

Of the more than 200 employees, after-sales support services is, by far, the



It is not just the solutions and services Abel-Womack offers that make the company successful – it’s the people.

“OUR SPECIALIZED STAFF IS COMMITTED, HARD-WORKING AND ALWAYS CUSTOMER-FOCUSED.”

➔ largest department, including 100 factory certified field service technicians covering seven eastern states. Abel-Womack serves its markets with three office and warehouse locations covering 85,000 square feet (7,650 square meters) in total.

LONG COMPANY HISTORY

The organization started in 1922 as Robert Abel & Co., an overhead crane distributor. As the role of material handling grew in industry, so did Abel's product offerings and capabilities, with the addition of lift trucks, conveying systems, storage and retrieval systems, and electronic warehouse management systems. In 1998, the company acquired Womack Material Systems Inc. In 2003, the two companies were re-branded as Abel-Womack Integrated Handling Solutions to provide a single image in the markets they serve.

The future continues to look promising for Abel-Womack. In 2003, total sales were USD 68 million; equipment sales were USD 38 million or 56 percent of total sales. Croce is confident that the company will continue on a growth path. “We expect 15 percent growth next year.” ●



Mike Romano and John Croce believe in a positive future for the company.



BT Raymond is Abel-Womack's largest supplier on a revenue basis.

Dealer of distinction

Abel-Womack Integrated Handling Solutions is one of BT Raymond's largest dealers in the United States. Abel-Womack represents 10 major suppliers and a host of others. However, BT Raymond is the largest supplier on a revenue basis. “We sell more BT Raymond products than any other,” says John Croce, president of Abel-Womack. “In fact, BT Raymond

products represent about 50 percent of our total equipment sales.” The company has had a business relationship with BT Raymond since 1959. Today, the company states that the BT Raymond products drive most of the customer support aspect of the business.

SYMBIOTIC RELATION

BT Raymond has a minority position in the business, which results in a symbiotic relation with Abel-Womack. “The strength of the relationship

between Raymond and its distributors is founded on communication and cooperation,” says CEO Mike Romano. “The ability to act as one in favor of our customers, is second to none in the industry.”

BT Raymond is pleased with the relationship, as the company has awarded Abel-Womack the Raymond Dealer of Distinction Award 10 times. The award is based on a dealer's overall performance compared with other BT Raymond dealers in the country.

TOWER OF POWER

With its nitrogen accumulator and electricity regeneration system, the BT Vector C15 is one of the most powerful and high-tech trucks of its kind.

The C15 can lift a 1,000-kilogram (2,200-pound) pallet to a maximum height of 14.3 meters (47 feet), together with the cab and the driver.



BT INDUSTRIES' NEW flagship combination truck, the BT Vector C15, is an articulated, battery-driven forklift. It was launched in 2003, and already this warehouse giant has outsold its predecessor, the CTX, by two and a half times on a yearly basis.

The C15 is full of high-tech finesse and well thought-out ergonomics. But the most innovative system onboard is the way the lift functions. This patented Advanced Lift System has positive repercussions throughout the whole operation of the C15.

Capable of lifting a 1,000-kilogram (2,200-pound) pallet to a maximum height of 14.3 meters (47 feet), together with the cab and the driver, the C15 is one of the most powerful forklifts of its kind.

ACCUMULATED STRENGTH

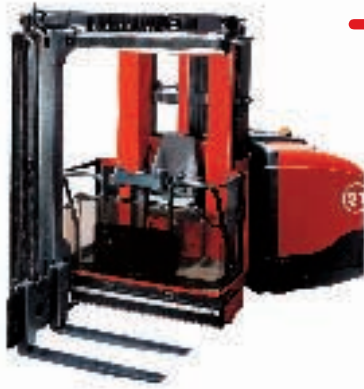
As with a normal forklift, the power that is required to lift a load comes from a hydraulic system where a pump is used to push oil through cylinders. But the C15, which has two standard hydraulic lift cylinders, gets a helping hand from a third counter-balance cylinder and a so-called accumulator.

This accumulator, which is slightly bigger than a standard diving tank, or around 20 liters (five gallons), contains a synthetic rubber bladder filled with nitrogen pressurized at 200 bar. The bladder is surrounded by oil that is connected to the counter-balance cylinder.

When the lift goes up and the pump turns on, the bladder naturally expands and pushes the oil, giving power and energy to the lift system. When the lift comes down, the reverse happens and the oil stores energy by compressing the gas.

TEXT: ALEXANDER
FARNSWORTH
ILLUSTRATIONS:
ANDREA SJÖSTRÖM
PHOTO: BT

TOWER OF POWER



“INSTEAD OF INSTALLING A V-8 MOTOR, WE INSTALLED A SMALLER MOTOR BUT STILL GET THE SAME POWER AS THE V-8.”



“The net effect is that 75 percent of the cab, mast and load carrier’s deadweight, around 1,500 kilograms [3,300 pounds], is carried by the accumulator,” says Andrew Corke, the C15 product manager. “This means that the other hydraulic cylinder system is effectively only lifting the weight of the load and 25 percent of the deadweight, or 500 kilograms [1,100 pounds].”

Joakim Bärnström, a hydraulics and software designer at BT, uses a car analogy. “Instead of installing a V-8 motor, we installed a smaller motor but still get the same power as the V-8,” he says.

Corke uses some other analogies to explain the accumulator system. “It is not perpetual motion, yet,” he says. “It is hard to lift 100 kilos [220 pounds].

But if you coil a spring under the 100 kilos when you try to lift, the spring will help. The same goes for the accumulator. It is like a counterweight on an elevator.”

Similar accumulator systems have been used on large metal presses to impart, besides gravity, extra forces to the metal sheets. BT Industries is the first to use this technology on forklift trucks.

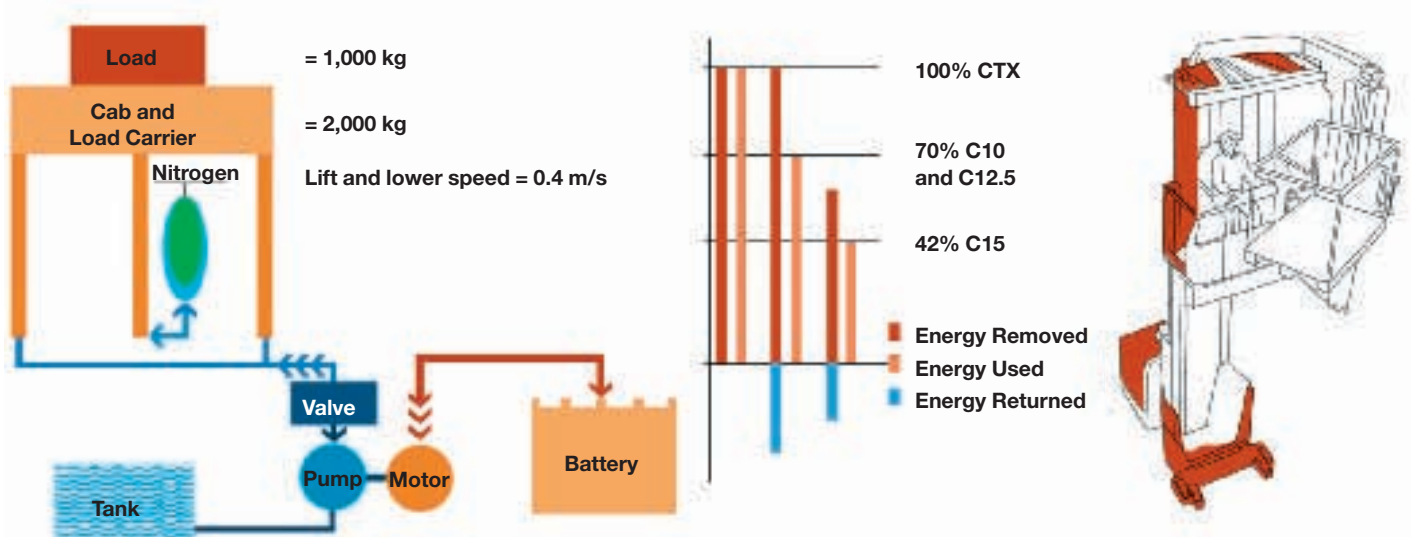
MORE WORK

More for less has distinct benefits for both customers and BT.

For one, BT engineers were able to use a smaller lift motor rated at only 14 kW. Similar lifting abilities on competitor machines require motors rated between 21 and 23 kW.

C15 consumption

This diagram is the sum of one storage and one retrieval cycle. It does not include driving, picking up or depositing the load. System efficiency is 55 percent and average balancing force 50 percent.



Truck finesse

The combination truck, BT Vector C15, can be used for both full pallet handling and order picking at height, hence the C in its name. The number 15 in the name means the unit can lift 1,500 kilograms (3,300 pounds) at a height of 10 meters (33 feet).

The patented BT Advanced Lift System reduces the power required for the lift motor and

makes even larger energy savings possible. The result is longer operating time per battery charge compared to competitor units.

The C15 is also extremely stable, in part due to its four-wheeled chassis, rigid mast and the 1,800 kilograms of lead acid battery that sits in the back of the unit.

Other features include a three-way fork unit, which can

change direction – left, front or right – in an instant. And an optional Windows-based control panel allows online wireless contact with the warehouse management system.

OPTIMUM SPEED

The C15 is also fast and can travel at speeds of up to 12 kilometers (7.5 miles) per hour. A special speed-to-height algorithm, or an optimum speed for

height calculation – known at BT as Optipace – allows for safe driving even at a height of 14 meters (46 feet). In narrow aisles, the C15 can be guided automatically through a system including an antenna and wires buried in the floor of a warehouse.

BT Industries spared no expense in making the C15 a truly unique combination truck on the forklift market.

An important corollary to this is that since the motor is smaller, its requirements for battery power are also smaller, which in turn translates into longer operating hours per charge. And a smaller standard motor is also cheaper for BT.

But then the C15 has an added finesse. Usually, hydraulic systems create a lot of heat as pressurized oil circulates through valves that open and shut, to let a load down, for example. This heat is a nuisance as it gets passed on to the environment in the truck.

On the C15 however, returning oil from the system does not get as hot. It gets passed through the pump instead. Through some sophisticated algorithms and other techniques, this pump

turns into a generator to generate electricity. This electricity is then used to recharge the battery, increasing the vehicle's operating hours by almost 25 percent.

The C15 can run for about 14 hours without recharging. Recharge time is between eight and 13 hours.

The C15's nitrogen accumulator and electricity regeneration system, as well as all the other improvements, took about three years to develop.

"Despite its size, the C15 also requires less space in the warehouse to maneuver thanks to its articulated steering," Corke says. "And that means a warehouse can achieve savings by storing more pallets than they used to in the same space." ●



Since the motor is smaller, its requirements for battery power are also smaller, which in turn translates into longer operating hours per charge.



Despite its size, the C15 requires less space in the warehouse to maneuver thanks to its articulated steering.



Polish Sokpol's production this year is about 180 million juice cartons.

THE JUICY DETAILS

Sokpol is a success story. Started 12 years ago with two production lines in a rented building in a dilapidated old textile factory, the company has become the largest producer in Poland of fruit juice in cartons. The man behind the story is Roman Sobczyk.



ROMAN SOB CZYK COMES from a family of doers. His father was a welder, who managed to build up a business during the communist era supplying spare parts for the coal mining industry. Eventually he was employing 10 people. His son evidently didn't want to try his luck finding a niche in the communist system. After studying mechanical engineering, he emigrated to Germany in 1980.

TEXT:
MICHAEL LAWTON
PHOTO:
THOMAS MÜLLER

"I didn't speak any German," says Sobczyk, "so I wanted to make sure I learnt it properly." That meant a period of odd jobs, but in 1983 he was ready to make a career, and took his first proper position. In 1986, he moved to the German headquarters of the packaging systems manufacturer TetraPak, adapting its machines for the needs of specific German customers.

In 1989, the Berlin Wall came down

and Europe was once more open. Sobczyk and his wife decided to go home. "We took money we'd saved to build a house and bought two production lines from TetraPak, and in 1992 we went back to Poland. It was a risk, but we thought to ourselves: if we don't do it, we'll always wonder whether we should have."

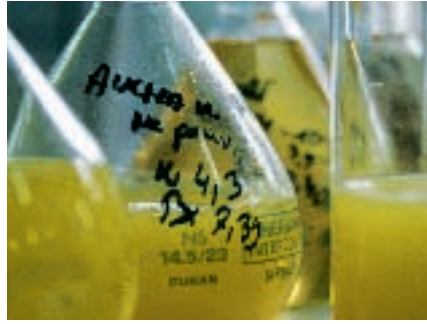
Sobczyk's firm had one big advantage over other juice factories in Poland: "I knew everything about the machines. We never needed anyone from TetraPak. I could set them up, repair them, adjust them."

ON THEIR OWN

Sokpol started by filling cartons for other companies. They supplied juice cartons and concentrate. "It gave us money," says Sobczyk, "which allowed



When Roman Sobczyk founded Sokpol in 1992, he had two production lines. Today, his company has 23 production lines and is the biggest juice producer in Poland.



“OUR OWN BRAND MUST BE THE FOUNDATION OF OUR BUSINESS.”

us to develop our own brands. Filling cartons for others is cheap, but it’s a very tightly fought market, so we wanted our own brands.”

Now Sokpol produces five brands, 50 percent of production, including classic juices, nectars and drinks, a range for young people, and a niche product with orange, milk and aloe vera. The other 50 percent is private labels for big retailers. About 8 percent is exported within central Europe, and Sobczyk is currently hopeful about a contract for a German private label. Production this year is about 180 million cartons.

Sobczyk originally thought those two production lines would last him 10 years, but 12 years later, he has 23 lines, with annual capacity of 550 million units. Many of the lines are second-hand – he has bought them as they became available – but they are ready for when Sokpol expands even further.

A NEED FOR COLLATERAL

Sokpol has also expanded from its original premises. It rented further buildings from the textile factory, and finally bought the site two and a half years ago. “It was very difficult to borrow money from the banks without owning the property as collateral,” says Sobczyk, “and the textile factory needed us as tenants because its business had collapsed and our rent was its main source of income.”

Sokpol renovated only the interiors of the buildings. Inside, the scene is dominated by the squeaky clean stainless steel of the production lines. Although the company makes fruit juice, you will not find any fruit. Tankers deliver concentrate, which is mixed with water and may be sugar or sweeteners and then filled

into cartons. It is a largely automated process.

Only now will the facades of the old buildings be renovated. But there is one new building: the 2,500-square-meter logistics center with a capacity of 7,250 pallets. The project was 50 percent financed by the European Union, with 25 percent of that money coming from the Polish government. But Sobczyk says, “We would have done it anyway. We needed the new distribution center.”

EU BENEFITS

Even aside from that useful subsidy, Sobczyk is sure that the EU offers benefits to Sokpol: “It makes it easier for our trucks to get to other countries without having to wait at the borders,” he says, “and it’s much easier for us to tender for contracts in other EU countries.”

Sobczyk hopes that new contracts will be a source of a continuation of the 15 percent growth that Sokpol has seen over the last few years. Real long-term growth, he thinks, will come from the big private labels. “Some people say the retail chains push prices down,” he says, “but they’re stable companies. Back in the 90s, we had deals with companies that paid better, but they went broke.” He notes that 60 percent of juice in Britain is private label. “The growth is in international tenders for the big retail chains,” he says.

At the same time, he wants to concentrate on one of his brands, Siódme Niebo, or Seventh Heaven. A major advertising campaign for the product is about to start. “If we can sell 22 million units a year without advertising,” says Sobczyk, “we should do much better after the campaign. Our own brand must be the foundation of our business.” ●

A logistics center with an edge

Sokpol’s new logistics center is fitted with a Radioshuttle system from BT Poland, including a seven-meter high racking system and six shuttles. Shuttles are controlled by “pilots” – radio units in the forklift trucks, which are also equipped with rugged computer terminals and linked to Sokpol’s warehouse management software. Trucks bring pallets from production to the entry point of the racking, and carry out other tasks while the shuttle delivers the load to its storage position.

At the other end, shuttles take pallets to the racking’s exit point, where they can be picked up for distribution. Radioshuttle allows maximum use of racking space, because there is no need to provide room for internal truck maneuvers, and automation within the racking minimizes damage to racking, trucks and loads from collisions between trucks and racking. With a storage capacity of 7,250 pallets, Sokpol’s system is equipped for a current throughput of 2,200 pallets a day. BT has supplied a total of 25 forklift trucks for Sokpol’s warehousing needs.



Sokpol’s system is equipped for a current throughput of 2,200 pallets a day.

Logistics wiz says ‘no thanks’ to automation

At little or no cost, companies are learning how to decrease labor costs by making simple innovative changes to their distribution layouts and operations, according to logistics expert Art Avery.

TEXT:
ART AVERY
ILLUSTRATION:
GETTY IMAGES

Recently, I responded to an inquiry from a large third party logistics (3PL) company that wanted to attract new customers. The company was also seeking expert suggestions for improvements in its methods of distribution. I offered simple solutions that I predicted would triple productivity at little or no cost. The response? “Our prospective clients will be much more impressed if we can show them that we are using the very latest in automated equipment.” Oops, we were out.

My preference for the non-automation route to efficiency and cost savings is directly related to my more than 32 years of first-hand distribution experiences.

IMPROVED EFFICIENCY

I have had the privilege of doing contract consultation work with a U.S.-based company called Menlo Logistics, a large, international 3PL, on several problematic distribution projects. Menlo has designed and operated distribution centers for hundreds of well-known companies around the world, and often does not use conveyors, pick-to-light, or fancy sorting systems.

Instead, Menlo’s secrets for multi-location successes have been:

1) The use of the appropriate product-specific material handling equipment for receiving, storage, put-away, picking, and transport.

2) The use of a great warehouse management system in combination with RF scanners and flexible, efficient warehouse designs.

Although these easily implemented changes have some inevitable costs associated with their acquisition and implementation, the costs are minimal compared to the aggressively marketed, highly automated systems on the market.

In August 2004, a large distributor of electronic products retained my busi-



“THE COSTS ARE MINIMAL COMPARED TO THE AGGRESSIVELY MARKETED, HIGHLY AUTOMATED SYSTEMS ON THE MARKET.”

ness for consulting services. The company was operating from two separate locations. One used an elaborate pick-to-light and powered conveyor system that had cost nearly 1 million U.S. dollars to install. The other used a simple paper-based pick system and roller conveyor. The company wanted to know which system was more efficient.

AUTOMATION PROBLEMS

Upon on-site observation, I determined that in the first location with its pick-to-light pass-along system, at least 50 percent of the pickers at any one time were standing inactive waiting for the next cartons to reach their zone. Additionally, this automated operation was literally “hog-tied” by the fact that if a slot was found to be empty of designated product, the programming brought the line to a screeching halt, waiting for replenishment. The lights meant to guide the pickers to the next product

locations were barely noticeable, at times resulting in the picker erroneously pulling product from the slot next to that actually being lit for picking.

SIMPLE SOLUTIONS

By contrast, at the second location, three pickers at a time were quickly assembling pop-up boxes, corresponding with batches of orders that had been created by office personnel based on product location. Using paper picking documents and laser scanners, they rapidly picked products and placed them into their properly sized and system-identified shipping boxes.

The first location ended up switching to a more simple solution, and at last report, pick rates had already increased by some 30 percent and accuracy was greatly improved.

A MATTER OF COST

The majority of my clients and prospects have identified remarkably similar pain points in their warehousing and distribution operations. I am certain that this goes for many of the readers of this publication, as well. Millions, maybe billions, of dollars of business per year does not necessarily correspond with distribution efficiency.

The universal problem areas include picking and shipping errors, overcrowded conditions, blocked aisles, late shipments, frustrated supervisors and workers, high labor costs and lost customers, plus another and often overlooked distribution cost factor – a pick rate of less than 150 lines (not items) per hour. Check *your* stats. ●

Art Avery, industrial engineer BS MS, has specialized in distribution and systems design for more than 30 years.
www.warehouse-layout-design.com

M16 latest reach truck addition



The Reflex M16 offers great visibility.

The new Reflex M16 expands BT's range of reach trucks for medium-intensity applications. With a lift capacity of 1,600 kilograms (3,500 pounds) and lift height of 8.5 meters (28 feet), the truck is based on the successful technology of the Reflex range and offers great visibility, ergonomically designed controls, 360-degree steering

plus an electronically regulated lift- and lower function. The M16 features a triplex mast with fork tilt, plus battery capacities of 300, 450 or 600 Ah. The combination of handling efficiency and ergonomics makes the M16 a good choice for applications such as removing and placing goods in racking, deep-stacking and floor-stacking. The truck should do well in both the daily goods sector and industrial environments.



The M16 features a triplex mast with fork tilt.



Proud winners of BT's Award of Excellence.

Awarding excellence

BT's Award of Excellence program has produced its first set of winners – and the hunt is on for more. The program was initiated in 2003 to encourage market distribution companies to continuously develop and improve their business. In the category Sales – Hand Pallet Truck Factory Orders, Kuwait was the undisputed winner with its 805 percent increase in percentage sales. The Czech Republic, Greece and Poland were winners in the category for volume producers, and all three countries also won the Award of Excellence for Local Marketing Campaign 2004.

Software for lift truck people

BT Raymond's new ProFleet lift truck management software is designed to help customers reduce their fleet operating costs by analyzing exactly how much they are spending, and where they are spending it. The program captures parts and labor costs by truck and generates utilization, cost per hour and scheduled maintenance reports, and can be installed on any Windows 2000

or Windows XP-based personal computer.

The software has been developed for warehouse maintenance and operation managers, or, as Edgar Warriner, National and Major Accounts director at BT Raymond says: "By lift truck people, for lift truck people." ProFleet is available to lift truck users through authorized BT Raymond dealers.



The new 112XD sets a new standard in performance, reliability and durability.

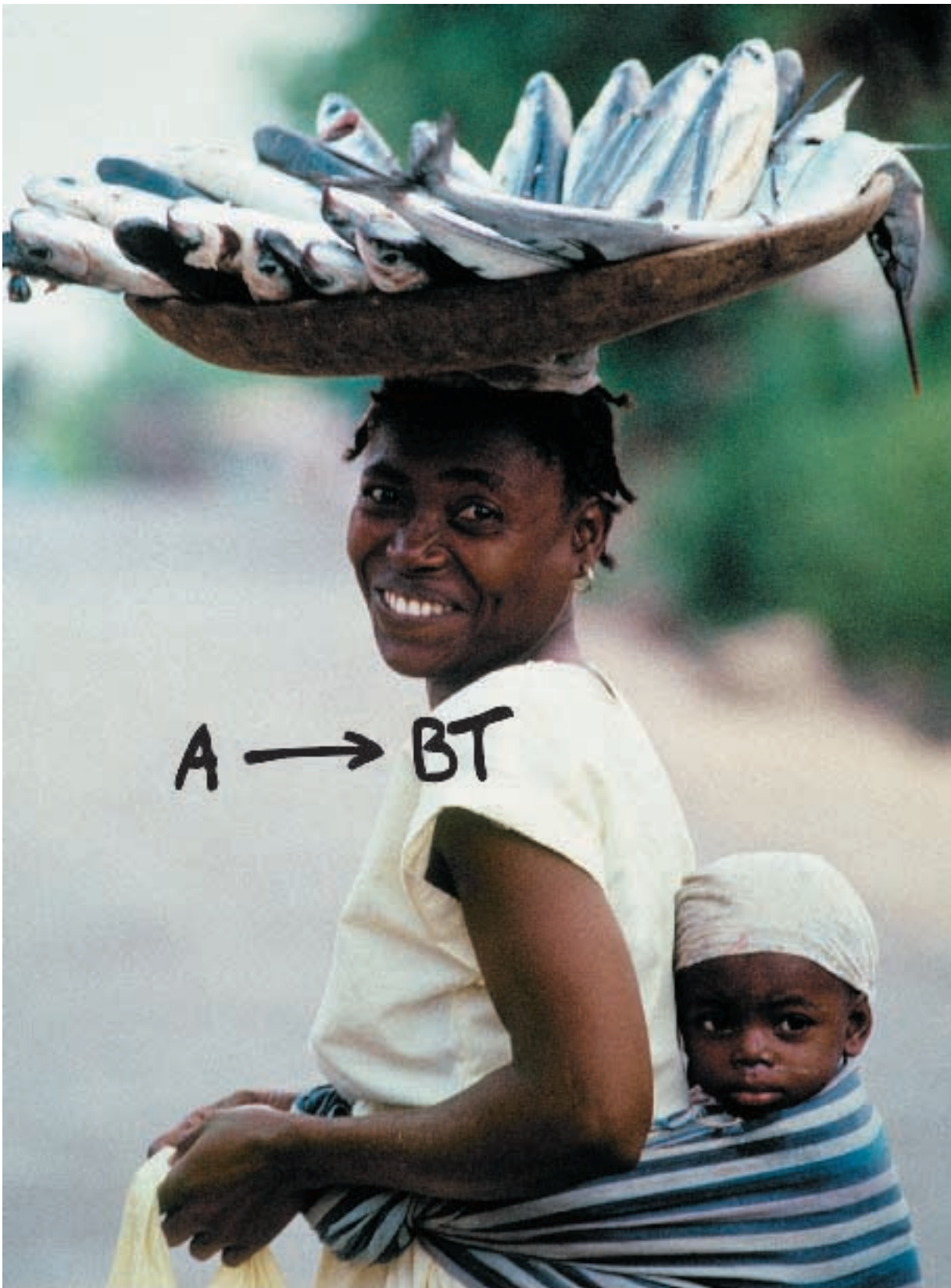
Higher performance with 112XD

BT Raymond's new 112XD walkie pallet truck offers customers faster, smoother order picking through its enhanced performance and clever design. Improved performance is evident with the truck's speed and acceleration. The Model 112XD travels 6.4 miles (10 kilometers) per hour loaded and 8.8 miles (14 kilometers) per hour unloaded,

and has significantly enhanced acceleration in the coast mode for faster order picking. Operators will also benefit from improved pallet entry and exit. BT Raymond has designed the new truck with extended tip forks enclosed from underneath to provide smoother transition over bottom boards, and reduced fork thickness

for better clearance.

"The Model 112XD walkie pallet truck has a very robust design," says Warren Brower, marketing director for Class III Products at BT Raymond. "It sets a new standard in performance, reliability and durability by which all others in this category will now be measured."



Some ways of handling goods leave little margin for improvement, but sometimes it can be done. It is all about anticipating the customer needs and offering the right products and services. Not occasionally, but consistently because circumstances can change. Take our new VECTOR C15 very narrow aisle truck with its unique design combined with the Advanced Lift System, which reduces energy consumption up to 30%. So easy, but so useful from BT.

www.bt-nederland.com
magazijntrucks en vorkheftrucks



Handling innovation



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